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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 16, 2002

CERTIFIED RETURN RECEIPT
7099 3400 0016 8895 9703

Aaron H. Hancock
Director of Mining and Transportation
Interpace Industries, Inc.
736 Harrisville Road
Ogden, Utah 84404

Re: Initial Review of Notice of Intention to Commence Large Mining Operations, Interpace Industries, Inc., Henefer Red Clay, M/043/014, Summit County, Utah

Dear Mr. Hancock:

The Division has completed a review of your draft Notice of Intention to Commence Large Mining Operations for the Henefer Red Clay Pit, located in Summit County, Utah, which was received February 25, 2002 . After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. Please provide a response to this review by May 17, 2002.

The Division will suspend further review of the mine NOI until your response to this letter is received. If you have any questions in this regard please contact me or Lynn Kunzler, of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
P:\GROUPS\MINERALS\WP\M043-Summit\m0430014-heneferredclay\final\M43-14-initialreview.doc

REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Interpace Industries, Inc.
Henefer Red Clay Pit

M/043/014

R647-4-105 - Maps, Drawings & Photographs

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)
The notice fails to provide any maps of the contributing watershed, diagrams depicting the drainage construction and reclamation diagrams of channel reconstruction. Please include the exact location of the proposed channel drains and drainage structures (i.e. berms, ditches, etc.). The notice fails to call out the size of cobble to be used in the drain and what will keep the drain from getting clogged with sediment. How will the cobble will be removed and the drainage reestablished following mining? (TM)

R647-4-106 - Operation Plan

106.7 Existing vegetation - species and amount
The notice indicates that an outside consultant will perform a vegetation survey during the spring/summer of 2002. Please note, the Division cannot give final approval until this survey is completed, reviewed and found to be adequate. (LK)

R647-4-107 - Operation Practices

107.2 Drainages to minimize damage
The current plan proposes filling the drainage with cobbles. There are no engineering designs associated with this plan. This proposal will have to be looked at closely to determine if this is an acceptable environmental practice. A culvert may be a better alternative. The comment was made that the drainage receives very little if any drainage. Please provide photos of the upstream drainage channel and downstream drainage channel. This will help us make a final decision to grant or deny the use of a 300 foot French Drain. (TM)

107.3 Erosion control & sediment control
The current plan calls for ditches and berms to prevent erosion and control sediment. Please show on a map where these structures will be located. (TM)

107.4 Deleterious material safety stored or removed
Please be advised that the secondary containment for the onsite fuel storage needs to be at 110% of the capacity of the fuel tank. (LK)

107.5 Suitable soils removed & stored
Please provide a soil analysis of the soil materials that will be used for reclamation. This analysis needs to include: Texture, pH, EC (conductivity), CEC (cation exchange capacity), SAR, Percent Organic Matter, Total nitrogen, Nitrate nitrogen, Phosphorus (as P_2O_5), and Potassium (as K_2O). This data is needed to determine

the type(s) and rate(s) of any fertilizer or soil amendments that may be required. (LK).

Under section R647-4-107-C of the plan it states that 6-8 inches of soil will be used to reclaim the site. In section R647-4-110.5-A the plan indicates that 8-10 inches of soil will be used. Calculations used for the surety estimate reflect a total of at least 10 inches of soil. Please revise the plan to make each soil depth reference consistent. (DJ)

R647-4-109 - Impact Assessment

109.1 Impacts to surface & groundwater systems
See comments under R647-4-105.3. (TM)

109.4 Slope stability, erosion control, air quality, safety
The Division understands the lithology of the site is unique and that erosion of the soils is not presently a major problem. However, the remanufactured soils that Interpace is proposing to place over the site may not exhibit these same qualities. The soil surface should be ripped on contour after the soils have been placed to assure the stability of the site. (DJ)

The Division recommends contour ripping using a dozer ripping on contour to roughen the surface for improved water retention. Use of a motor scraper to roughen the surfaces prior to seeding is not recommended. (DJ)

R647-4-110 - Reclamation Plan

110.5 Revegetation planting program
With 'manmade' soils as proposed in the plan, the Division has found that the application of composted manure yields much better results than the use of commercial fertilizers (which seem to encourage weedy species. Unless the soil analysis shows significant deficiencies of nutrients, the use of commercial fertilizers is discouraged (see R647-4-107.5). The Division can assist in selecting the appropriate types and rates of soil amendments and fertilizers once this analysis is received. (LK)

The seeding methods section indicates that after broadcast seeding, the area will be harrowed. The Division has found that if seeding occurs right after ripping, that harrowing in not necessary. Also, harrowing tends to smooth (rather than roughen) the site which can reduce revegetation success. (LK)

The proposed seed mix contains a high proportion of aggressive introduced species. In time these species may result in a monoculture (not desirable for the intended post mining land use). We also noted, with the exception of four-wing saltbush, that there are no shrubs or forbs in the proposed mix. Attached is a seed mix that has been designed with wildlife habitat as a goal. If this mix is satisfactory, please incorporate it into your plan. Otherwise, please revise your mix to include forbs and shrubs (browse) for wildlife. (LK)

R647-4-111 - Reclamation Practices

111.2 Reclamation of natural channels
Please provide for reclamation of the natural channel following mining and describe how the channel will be reconstructed. (TM)

Attachment: Seedmix

Recommended Revegetation Species List
for

Interpace Industries, Inc.
Henefer Red Clay
M/043/014

Common Name	Species Name	*Rate lbs/ac (PLS)
'Ephraim' Crested wheatgrass	*Agropyron cristatum 'ephraim'*	0.5
Tall wheatgrass	*Agropyron elongatum*	1.0
Bluebunch wheatgrass	*Agropyron spicatum*	2.0
'Piute' orchard grass	*Dactylis glomerata 'piute'*	0.5
'Magnar' Basin Wildrye	*Elymus cinereus 'magnar'*	2.0
Ladac Alfalfa	*Medicago sativa*	0.5
Yellow sweetclover	*Melilotus officinalis*	0.5
Palmer penstemon	*Penstemon palmerii*	0.5
Small burnet	*Sanguisorba minor*	1.5
Mountain big sagebrush	*Artemisia tridentata vaseyana*	0.1
Rubber Rabbitbrush	*Chrysothamnus nauseosus*	0.25
Forage kochia	*Kochia prostrata*	0.5
Bitterbrush	*Purshia tridentata*	1.0
	Total	10.85 lbs/ac

*This the recommended broadcast seeding rate.

Prepared by DOGM 4/11/02